

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of ~~errorless~~ switching, in a telecommunication network, from a basic data stream to a ~~copy of the basic~~ copied data stream obtained by bridging of the basic data stream at a first network node, the method being characterized in that the switching is performed at a second network node receiving both the basic data stream and the ~~copy~~ copied data stream, by picking said copied data stream upon performing an operation of delay equalization between the basic data stream and the ~~copy~~ copied data stream.

2. (currently amended) A method of on-line rearrangement of an original data stream composed of two or more basic fragments transmitted in respective original time-slots, wherein one or more vacant data slots exist in the original data stream, the method comprises steps of:

- providing a first node and a second node interconnected to one another by a telecommunication path for transmitting the original data stream from the first node to the second node,
- bridging one or more of said basic fragments at the first node, to obtain one or more respective ~~copy~~ copied fragments respectively occupying one or more of the vacant time slots,
- transmitting the obtained one or more ~~copy~~ copied fragments to the second node along with said original data stream via the telecommunication path,

- performing the switching, according to Claim 1, with respect to each of said ~~copy~~ copied fragments, wherein said basic fragment constitutes the basic data stream, said ~~copy~~ copied fragment constitutes the ~~copy~~ copied data stream, and said first and second nodes respectively constitute the first and the second network nodes, thereby ensuring substantially errorless rearrangement and obtaining a rearranged data stream.

3. **(original)** The method according to Claim 2, for rearranging SDH/SONET data streams.

4. **(original)** The method according to Claim 2, wherein the telecommunication path comprises one or more transmission lines.

5. **(currently amended)** The method according to Claim 2, comprising:

- multiplexing, after the step of bridging, all basic fragments of the original data stream with said one or more ~~copy~~ copied fragments into the form of an intermediate data stream to be transmitted to the second node, wherein the intermediate data stream includes fragments occupying all the original time-slots and said one or more vacant time slots;
- demultiplexing the intermediate data stream at the second node.

6. **(currently amended)** ~~The method according to Claim 5, wherein said step of switching is performed by:~~

A method of on-line rearrangement of an original data stream composed of two or more basic fragments transmitted in respective original time-slots, wherein one or more vacant

data slots exist in the original data stream, the method comprises steps of:

- providing a first network node and a second network node interconnected to one another by a telecommunication path,
- bridging one or more of said basic fragments at the first node, to obtain one or more respective copied fragments respectively occupying one or more of the vacant time slots,
- multiplexing all said basic fragments of the original data stream with said one or more copied fragments into an intermediate data stream including fragments occupying all the original time slots and said one or more vacant time slots;
- transmitting said intermediate data stream to the second node via the communication path;
- demultiplexing the intermediate data stream at the second node,
- switching at said second node at least one of said basic fragments of the original data stream to at least one corresponding said copied fragment by:

- defining at least one pair of bridged fragments, each pair comprising a particular basic fragment occupying one of said original time-slots, and a ~~copy~~-copied fragment of said basic fragment, occupying one of said vacant time-slots;

- equalizing delays between the basic fragment and the ~~copy~~-copied fragment in each—of said at least one pair pairs;

- assembling an outgoing data stream, using said at least one ~~copy~~-copied fragment instead of the respective at least one basic fragment, thereby obtaining the rearranged data stream comprising at least one fragment transmitted in a different time-slot than in the original data stream.

7. **(currently amended)** The method according to Claim 6 2, further comprising a step of freeing one or more of the original time slots at the first node, for transmitting there-through one or more new signals.

10/ ~~8. **(currently amended)** The method according to Claim 2,~~

A method of on-line rearrangement of an original data stream composed of two or more basic fragments transmitted in respective original time-slots, wherein one or more vacant data slots exist in the original data stream, the method comprises steps of:

- providing a first node and a second node interconnected to one another by a telecommunication path,
- bridging one or more of said basic fragments at the first node, to obtain one or more respective copied fragments respectively occupying one or more of the vacant time slots,
- transmitting the obtained one or more copied fragments to the second node along with said original data stream via the telecommunication path,
- switching at said second node at least one of said basic fragments of the original data stream to at least one respective said copied fragment upon performing an operation of delay equalization between said at least one basic fragment and said at least one respective copied fragment, to obtain a rearranged data stream,

wherein said delay equalizing operation comprises a step of pointers' justification with respect to at least one of said ~~copy~~ copied fragments and its corresponding basic fragment, while pointers of said basic fragment and the corresponding ~~copy~~ copied fragment serve mutual references to one another; payloads of standard frames of said fragments are thereby synchronized owing to mutual adjusting positions of said pointers.

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9. (currently amended) A system for ~~errorless~~ switching, in a telecommunication network, from a basic data stream to a ~~copy of the basic data~~ copied data stream obtained by bridging of the basic data stream; the system comprises a first network node interconnected with a second network node via a telecommunication path; said first network node being capable of bridging said basic data stream, said second network node being intended for receiving both the basic data stream and the ~~copy~~ copied data stream; the system also comprising a network management block and a delay equalizing means operative to perform delay equalization between the basic data stream and the ~~copy~~ copied data stream at the second network node, said network management block further causing picking the copied data stream and before dropping the basic data stream at the second network node.

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10. (currently amended) The system according to Claim 9, 13 designed for on-line rearrangement of an original data stream being composed of basic fragments transmitted in respective original time-slots while one or more vacant ~~data~~ time slots exist in the original data stream, wherein said basic data stream constitutes one of said basic fragments, and said ~~copy~~ copied data stream constitutes a ~~copy~~ copied fragment occupying one of said vacant time slots and obtained by bridging said basic fragment.

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11. (original) The system according to Claim 9, 13 designed for SDH/SONET data streams.

¹⁶
~~12.~~ (original) The system according to Claim ¹³~~9~~, wherein the telecommunication path comprises one or more transmission lines.

¹⁷
~~13.~~ (currently amended) The system according to ~~any~~ Claim ¹³~~9~~, wherein

- the first node includes a Network Element (NE), comprising a first cross-connect device having an input stage and an output stage, and its control unit;
- the second node includes a Network Element (NE), comprising a second cross-connect device having an input stage and an output stage, and its control unit;
- the first node is provided with a MUX unit connected at its input stage to the output stage of the first cross-connect, and the second node is provided with a DEMUX unit, wherein the output stage of the MUX unit is connected to the input stage of the DEMUX unit via the telecommunication path;
- the second node being also provided with the delay equalizing means connected between the output stage of the DEMUX unit and the input stage of the second cross-connect.

¹⁸
~~14.~~ (currently amended) The system according to Claim 9, A system for switching, in a telecommunication network, from a basic data stream to a copied data stream obtained by bridging of the basic data stream; the system comprises a first network node interconnected with a second network node via a telecommunication path; said first network node being capable of bridging said basic data stream, said second network node being intended for receiving both the basic data stream and

the copied data stream; the system also comprising a network management block and a delay equalizing means operative to perform delay equalization between the basic data stream and the copied data stream before dropping the basic data stream at the second network node,

wherein said delay equalizing means are responsible for time aligning between the ~~copy~~ copied data stream and its corresponding basic data stream and comprises at least one unit capable of performing a pointers' justification operation for a ~~single-copy~~ said copied data stream and its corresponding basic data stream, by using thereof as reference for one another.

²¹
15. (currently amended) ~~The system according to Claim 13,~~ A
system for on-line rearrangement of an original data stream,
composed of two or more basic fragments transmitted in
respective original time slots while one or more vacant time
slots exist in the original data stream, into a rearranged
data stream comprising at least one fragment transmitted in a
different time slot than in the original data stream; the
system comprises a first network node interconnected with a
second network node via a telecommunication path; said first
network node being capable of bridging one or more basic
fragments of said original data stream to obtain respective
one or more copied fragments in respective said vacant time
slots, said second network node being intended for receiving
both the original data stream and said one or more copied
fragments; the system also comprising a network management
block and a delay equalizing means operative to perform delay
equalization between at least one basic fragment and the
respective at least one copied fragment before dropping said
at least one basic fragment,

wherein

- the first node includes a Network Element (NE), comprising a first cross-connect device having an input stage and an output stage, and its control unit;
- the second node includes a Network Element (NE), comprising a second cross-connect device having an input stage and an output stage, and its control unit;
- the first node is provided with a MUX unit connected at its input stage to the output stage of the first cross-connect, and the second node is provided with a DEMUX unit, wherein the output stage of the MUX unit is connected to the input stage of the DEMUX unit via the telecommunication path;
- the second node being provided with said delay equalizing means connected between the output stage of the DEMUX unit and the input stage of the second cross-connect,
and wherein the network management block, via the control units of the first and second nodes, is capable of causing:
 - the first cross-connect device - to double one or more particular basic fragments so as to output all the fragments of the original data stream and ~~copies~~ copied fragments of the one or more basic fragments,
 - the MUX unit - to produce the intermediate data stream from the fragments outputted from the first cross-connect, and the DEMUX unit - to restore said fragments upon transmission,
 - the means for equalizing delays - to process at least one pair of said particular basic fragments and their respective ~~copies~~ copied fragments in a predetermined order;
 - the second cross-connect device - to form an outgoing data stream comprising the rearranged original data stream

wherein said one or more basic fragments are respectively replaced with said one or more ~~copies~~ copied fragments.

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~~16.~~ (new) A method of switching, in a telecommunication network, from a basic data stream to a copied data stream obtained by bridging of the basic data stream at a first network node, the method being characterized in that the switching is performed at a second network node receiving both the basic data stream and the copied data stream, by picking said copied data stream upon performing an operation of delay equalization between the basic data stream and the copied data stream,

wherein said delay equalizing operation comprises a step of pointers' justification with respect to said copied data stream and its corresponding basic data stream, while pointers of said two data streams serve mutual references to one another; payloads of standard frames of said two data streams are thereby synchronized owing to mutual adjustment of positions of said pointers.

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~~17.~~ (new) The method according to Claim 6, for rearranging SDH/SONET data streams.

9

~~18.~~ (new) The method according to Claim 6, wherein the telecommunication path comprises one or more transmission lines.

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~~19.~~ (new) The method according to Claim ¹⁰~~8~~, for rearranging SDH/SONET data streams.

¹²
~~20.~~ (new) The method according to Claim ~~8~~¹⁰, wherein the telecommunication path comprises one or more transmission lines.

²⁵
~~21.~~ (new) The method according to Claim ~~10~~²⁴, for rearranging SDH/SONET data streams.

²⁶
~~22.~~ (new) The method according to Claim ~~10~~²⁴, wherein the telecommunication path comprises one or more transmission lines.

¹⁹
~~23.~~ (new) The system according to Claim ~~14~~¹⁸, adapted for rearranging SDH/SONET data streams.

²⁰
~~24.~~ (new) The system according to Claim ~~14~~¹⁸, wherein the telecommunication path comprises one or more transmission lines.

²²
~~25.~~ (new) The system according to Claim ~~15~~²¹, adapted for rearranging SDH/SONET data streams.

²³
~~26.~~ (new) The system according to Claim ~~15~~²¹, wherein the telecommunication path comprises one or more transmission lines.